



Understanding the Digital World

IDATE
Consulting



FTTH MENA Panorama

MENA Broadband Status

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Market at September 2015

FTTH MENA Conference – Muscat - November, 11th 2015

Agenda

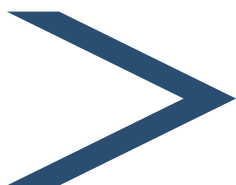
- Study Background
 - Objectives
 - Available results
- Status of Broadband in the region
 - Leading access technologies
 - National programs
- FTTH/B in MENA
 - Overview
 - Overall figures
 - Main trends in MENA's FTTH/B market
- MENA FTTH/B main trends
 - FTTH/B subscribers trends
 - FTTH/B Homes Passed distribution
 - FTTH/B technologies
 - FTTH/B Take Rates in MENA
 - Services : maximum speed rates and average tariffs
- Main observations / drivers for FTTH/B in MENA

Study Background

Objectives, available results

Objectives

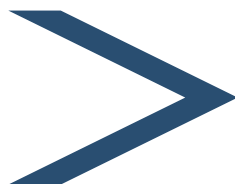
- Mission on behalf of the FTTH Council MENA
- Objective: to provide a complete summary of the status of FTTH/B in MENA
 - **19 countries analyzed** ⁽¹⁾
 - **Distinction between architecture: FTTH/B vs FTTN** (FTTN/C+VDSL, FTTLA, FTTx+LAN)
 - **Information on the national Broadband market** (national program, regulation, overall figures)
 - **FTTH/B Definition by FTTH Councils Worldwide** ⁽²⁾



Characterization of each project includes:

- Organization initiating the project
- Key parameters & Figures
- Technical parameters
- Financing & Business model

► Methodology used



- Desk research
- Direct contacts with FTTH players (questionnaires, phone interviews) & IDATE's partners in MENA
- Information exchange with FTTH Council, MENA chapter members

(1): Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, UAE and Yemen

(2): FTTH/B definition available at : http://www.ftthcouncil.eu/documents/Publications/FTTH_Definition_of_Terms-Revision_2015-Final.pdf

Available results for MENA

> About 49 projects listed in 19 MENA countries at September 2015

Quantitative

FTTH/B data	September 2015	
	Nb of Subscribers	Nb of Homes passed
Total FTTH/B in Kuwait	40 000	60 000
Zajil Telecom / KEMS		
Others		
MoC / NBN		

All ISP provide FTTH services using the network deployed under the MoC' program

Qualitative

Ooredoo-Qtel

Identification Operator/Organisation

Ooredoo Qatar is part of the Ooredoo group. Initially, the company was named Qtel and from 2013 it has changed its brand to Ooredoo.

The Qatari company is the incumbent operator in this country. It started providing Internet services in 1996.

In May 2011, Qtel became the first company in Qatar to reach FTTH Internet trial speeds of 100 megabits per second.

Key parameters

In August 2009, the operator announced the completion of a FTTH pilot project in partnership with Huawei. Based on GPON technology, the network which was supposed to be launched commercially by the end of the year 2009, connects houses in Mesaieed and Westbay Lagoon through the use of optical line terminal (OLT) and optical network terminals (ONT).

In January 2011, selling plans started over fibre optics.

In October 2012, Huawei was awarded a contract for the 2nd part of the FTTH rollout including 90,000 additional connections.

QTel is also deeply involved in the development of Smart cities, one of them being Lusail, notably in the context of the Worldcup 2022. FTTH rollout in Lusail is part of the Smart city project.

The first objective of Ooredoo was to cover the entire country via FTTH by end 2014. To reach its goal, the operator aimed to spend QR1 billion (~279 million USD). This goal has not been reached but the operator continues to expand its coverage: Ooredoo claimed 200,000 fibre broadband customers in December 2014 and the target of the operator is '100%' fibre at the end of 2015.

Fibre products was commercially launched in January 2012. those fibre products were initially available for residential customers. From August 2013, very high speed connections are also available for small and medium-sized businesses.

Since October 2014, customers can opt Internet connection of up to 100 Mbps.

Figures

Number of Households/Business Units passed

52,000 homes passed at June 2012 (IDATE estimates)
 135,000 homes passed at September 2012
 204,000 homes passed at September 2013
 298,000 homes passed at September 2014
314,000 homes passed at September 2015

FTTx subscriber base

7,500 FTTH subscribers at June 2012 (IDATE estimates)
 38,000 FTTH subscribers at September 2012
 120,000 FTTH subscribers at September 2013
 190,500 FTTH subscribers at September 2014 (IDATE estimates)
240,000 FTTH subscribers at September 2015

Technical parameters

Huawei has been selected for the FTTH equipment based on **GPON** technology

80% MDU 20% SDU

Source: IDATE for FTTH Council MENA

Status of Broadband in MENA

Leading access technologies – National programs

Leading access technologies

> More than 28 million fixed BB subscribers and 117 million mobile BB subscribers in MENA at September 2015

ADSL access technology is still leading the Fixed Broadband market but FTTH/B is growing more rapidly now in some countries (Bahrain, Saudi Arabia) or is already leading in others (UAE, Qatar).

% of FTTH subscribers in total Fixed BB subscribers

Qatar	95%
UAE	85%
Kuwait	25%
Saudi Arabia	18%

Source: IDATE for FTTH Council MENA

FTTH/B subscribers represent around 7% of total fixed BB subscribers in MENA at September 2015

Mobile BB is the leading choice for many end users in 13 over 19 analyzed markets. More and more telcos are getting involved in 4G and even 5G projects but very few are already providing services (mostly in GCC countries such as Qatar, UAE and Saudi Arabia)

National programs

- > **Some governments are deeply involved in the promotion of Broadband, and even Superfast Broadband, in the region.**
- > **This can be either by setting up coverage and take up rate objectives or by implementing dedicated companies responsible for the roll out of new infrastructure.**

The most significant programs have been launched:

- in **Qatar**, where, thanks to the QNBN, FTTH/B is clearly leading the access market (representing 95% of fixed BB subscriptions at September 2015)
- in **Oman**, where OBC is deploying a large neutral network, opened to all telcos
- more recently in **Lebanon**, where the program aims to cover the whole country with fiber based infrastructure by end 2022

In other countries, Broadband programs have been launched or announced but with few progression to date.

FTTH/B in MENA

**Overview, overall results, main trends in MENA's
FTTH/B market**

> More than 48 FTTH/B projects in MENA at Sept 2015



Incumbents and Alternative operators are the main actors involved in FTTH/B rollout



National programs should boost FTTH/B market in MENA in the middle to long term

Total FTTH/B Homes passed in MENA at September 2015

Incumbents	National companies / Municipalities / Utilities	Alternative operators / ISPs	Housing companies / RE owners
4 022 900	102 000	1350 700	152 000
71.5%	1.8%	24.0%	2.7%

Source: IDATE for FTTH Council MENA

FTTH/B in MENA – Overall Figures

In September 2015

- > 2,066,015 FTTH/B subscribers
- > 5,213,450 FTTH/B Homes Passed

YoY growth

- Subscribers: +20%
- Homes Passed: +27.8%



Average Penetration Rate : 39.6%
(from 41.5% at September 2014)



Source: IDATE for FTTH Council MENA

Main trends in MENA's FTTH/B market

- 5 Significant and dynamic markets (UAE, KSA, Qatar, Oman, Kuwait)
- 2 High potential market (Iraq, Iran)
- 2 Markets with significant announcements and/or progresses (Lebanon, Tunisia)
- 3 Steady markets with few evolution nor significant announcements (Jordan, Egypt, Palestine)

Incumbents in Tunisia and Morocco got involved significantly in enlarging FTTH/B coverage since mid-2014, but are facing difficulties to enhance switch to FTTH from end users.

Players higher sensitiveness towards FTTH/B benefits in general but still to be transformed to concrete projects

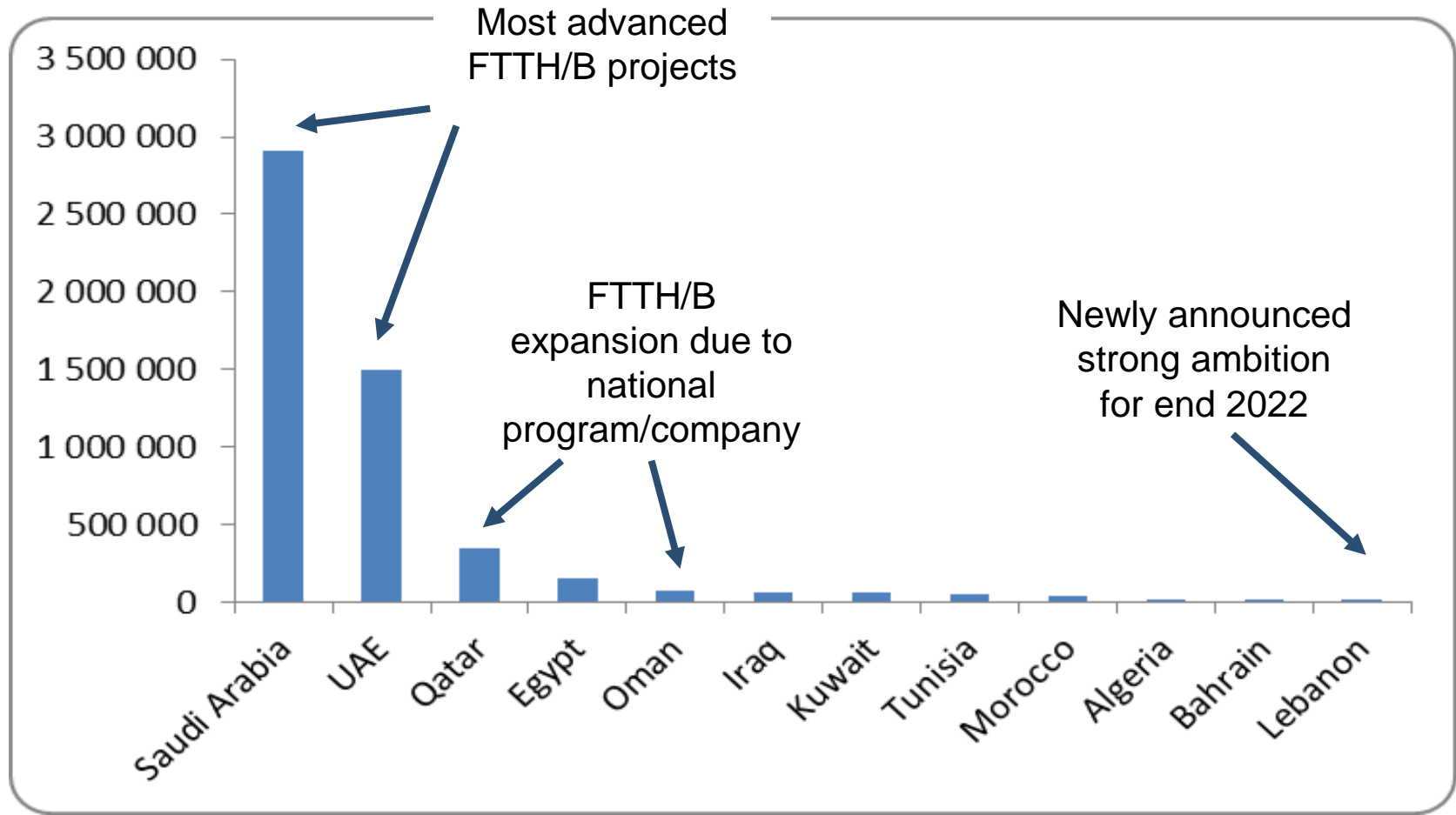
Main trends in MENA's FTTH/B market

- UAE is the main FTTH/B market (1.13 million FTTH/B subs)
 - 2 players are involved in FTTH/B market
 - Etisalat is dominating the FTTH/B market:
 - with a market share of 72.5%
 - with a national coverage
 - Good penetration rate (subs/HP): 75.3%, which confirms the commercial success of FTTH
- ... followed by Saudi Arabia (more than 610K FTTH/B subs)
 - Market dynamism confirmed from one year to another (+26.8% subscribers growth between Sept 14 and Sept 15) with 2 players involved in national rollouts
 - This dynamism has to be confirmed on the commercial side
 - STC is the more important FTTH/B players:
 - with a market share of 60% => decreasing since September 2014, facing higher competition from other players Mobily)
 - the largest coverage
- FTTH/B market is growing in Qatar (247K FTTH/B subs)
 - Ambitious objective from incumbent Ooredoo (Qtel):
 - National FTTH coverage: reached in 2014!
 - Even with the unachieved acquisition of QNBN by Vodafone, the market has grown significantly (nearly 30% growth between Sept 2014 and Sept 2015)
 - Ooredoo is pushing its end users to switch to FTTH

**UAE is leading
the Global
Ranking!!**

Main trends in MENA's FTTH/B market

- > 2 countries with significant rollouts, more than 1 million Homes Passed, nearly 3 million in KSA



Source: IDATE for FTTH Council MENA Chapter

Main trends in MENA's FTTH/B market

> High Take Rates ⁽¹⁾ in MENA

UAE: 75.3%

Qatar: 71.8%

Kuwait: 66.7%



Average Take Rates in MENA: 39.3%

> In September 2015, the main architecture deployed is pure FTTH: no changes since 2010

> Regarding technology, players have mainly chosen PON

Main architecture deployed (subscribers segmentation)	September 2015	Main technology deployed (subscribers segmentation)	September 2015
FTTH	98%	PON	89%
FTTB	2%	Ethernet	11%

Source: IDATE for FTTH Council MENA

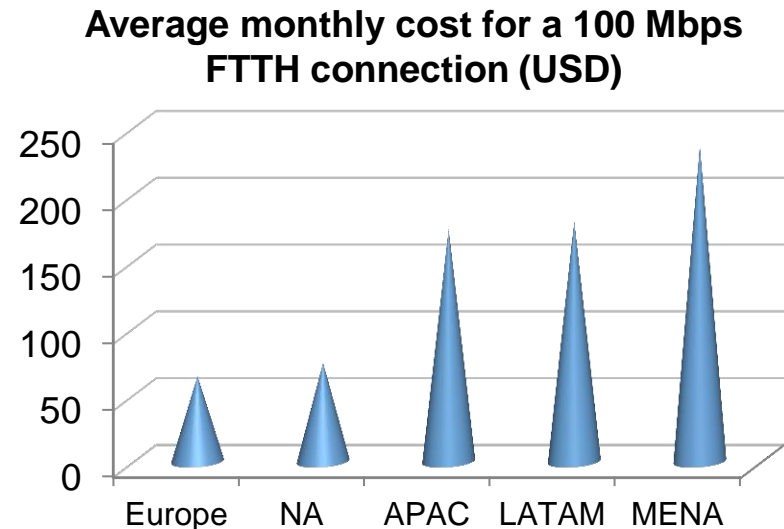
FTTH/B services and tariffs in MENA

> The region has not significantly entered the Gigabit race yet...

- Highest speed rate available reaches 500 Mbps in UAE
- The most widespread speed rate is 100 Mbps, available in Oman, Qatar, Jordan, UAE, KSA, Tunisia...
- Most telcos in GCC provide innovative TV and video services available on their new networks

> FTTH tariffs are relatively expensive compared to other regions

- End users have to pay from around 100 to 650 USD per month for a 100 Mbps FTTH connection (downstream, asymmetrical)



Source: IDATE for FTTH Council MENA Chapter

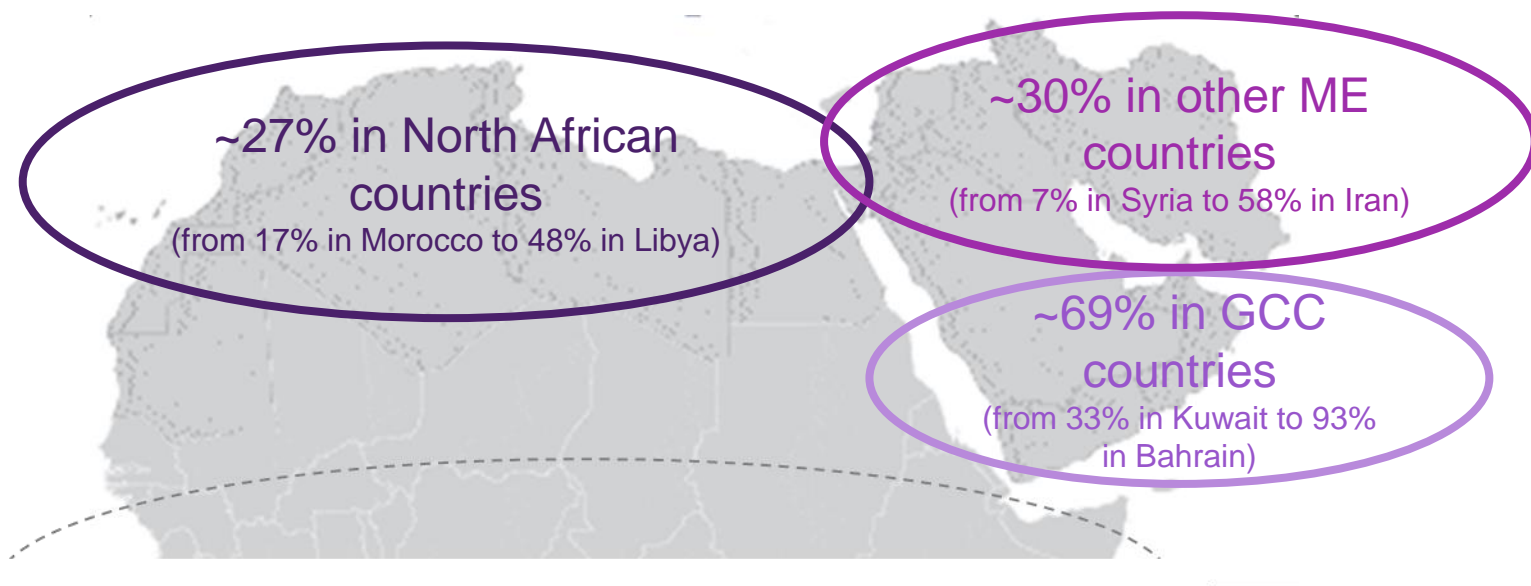
Main observations / drivers for FTTH/B in MENA

Main outputs

No take off for the global Fixed Broadband market

- The growth in FTTH/B coverage and take up rate is led by the dynamism of GCC countries, and notably UAE and KSA markets
- In other countries, announcements are followed lately by concrete rollouts
- The Broadband penetration is still low and current demand does not require rapid deployment of NGNs

Average % of Fixed BB subscribers in total Households



Source: IDATE for FTTH Council MENA Chapter

Main outputs

But there are some significant and ambitious FTTH/B projects

- In UAE and Saudi Arabia: FTTH coverage exhaustive or near to be
- In Qatar: Ooredoo and QNBN program => QNBN is today used by Vodafone and Ooredoo
- In North Africa, Lebanon is the latest country to have announced ambitious program to cover all country by 2022

FTTH/B is a priority: no noticeable FTTN projects announced to date

- Most projects, operational or announced, tend to focus on FTTH rollouts
- However, FTTN + VDSL is still a good solution for players in countries where the Broadband market is not mature yet and the economical context still has to get improved (Morocco, Jordan): the objective of telcos there is to be able to provide higher speed rates to end users, whatever the architecture.

Incumbents are leading the markets

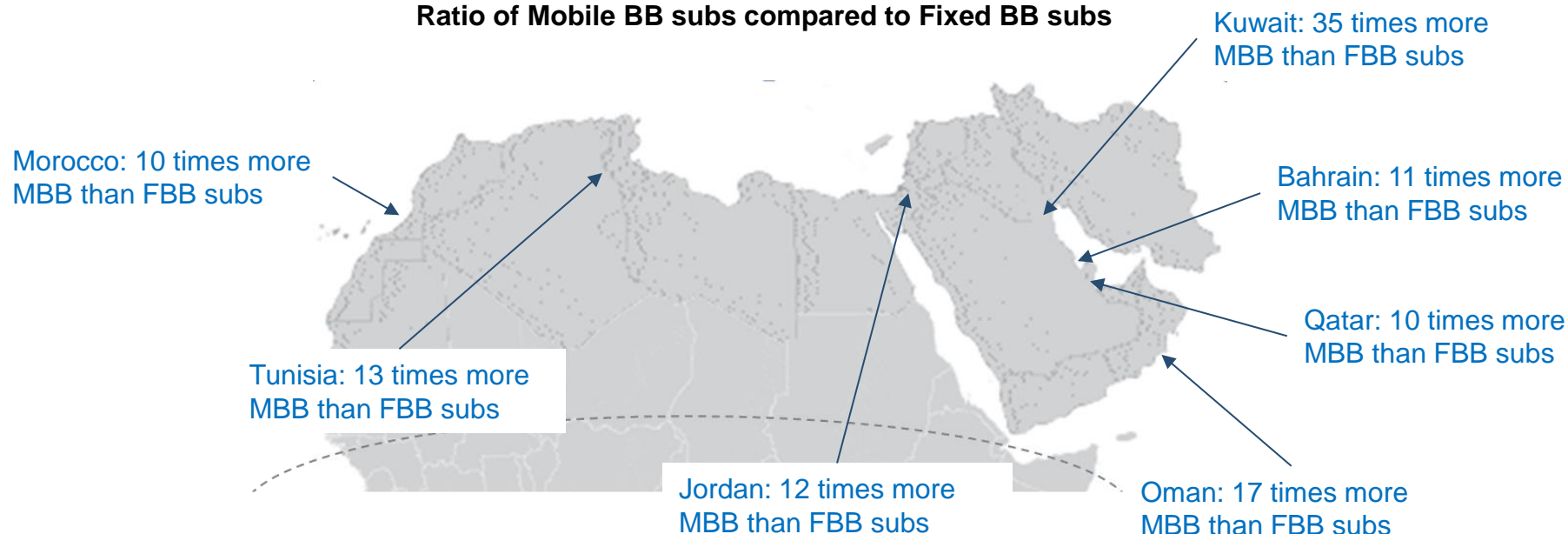
- The involvement of alternative players is growing and could enhance rollouts (Tunisia, Morocco)
- As in other regions, few other players show a strong interest in FTTH/B rollouts (some ROEs in Egypt, small telcos in Jordan)

Mobile BB as a competitor for FTTH in the region

A real leadership for mobile BB access technologies

- Mobile Broadband subscriptions overpass fixed Broadband subscriptions in several countries (Egypt, Morocco, Jordan,...), and this trend might not change even with the rollout of new networks.

Ratio of Mobile BB subs compared to Fixed BB subs



Source: IDATE for FTTH Council MENA Chapter

- But this could be an interesting opportunity for FTTH: not only because of the need for interconnecting base station with fiber, but also because the general demand for higher bandwidth (on both wireline and wireless networks) will probably increase

> Several drivers might impulse MENA's FTTH/B market

Mobile backhaul

- Fiber will be necessary to deal with the development of new mobile networks
- Leapfrog from 2G to LTE is possible, such as it could happen in other regions

New housing programs

- The growth of the Real Estate market is one of the highest, notably in GCC countries
- FTTH networks are more and more often considered as a must have

National plans

- MENA's government are becoming more and more aware of the benefits of NGN
- Their involvement is a way to compensate and stimulate the current lack of large scale private initiatives

Low quality of existing networks

- The copper networks are generally not efficient enough to support the provision of value-added services such as TV and video

Cloud services

- SMEs and SOHOs are heavy users of new and innovative services among which cloud storage solutions
- The trust in networks is a key parameter and FTTH/B infrastructure is a good answer

Higher competition

- Some players are beginning to adopt a regional strategy
- As an example, Ooredoo is already present in Tunisia, Qatar, Oman.

Thank you!